

Abstract of the Disclosure

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Disease associated human autoantibodies specific for human thyroid peroxidase are disclosed. Novel organ specific (TPO) human autoantibodies are disclosed which have been cloned, allowing definition of the antibody repertoire and the autoantigenic domains, encompassing a restricted immunodominant region on TPO recognized by patients with autoimmune thyroid disease. The novel compositions of the invention, their diagnostic and therapeutic applications, are, *inter alia* disclosed.